

## IPS Controller 9500

## SUBMITTAL

JOB: _____	REPRESENTATIVE: _____
_____	_____
ENGINEER: _____	ORDER NO: _____ DATE: _____
CONTRACTOR: _____	SUBMITTED BY: _____ DATE: _____
_____	APPROVED BY: _____ DATE: _____

SYSTEM LAYOUT / CONFIGURATION	
Number of variable pumps being controlled	_____ (Specify 1 to 6)
Number of remote zone Differential Pressure signals	_____ (Specify 1 to 18)

IPS CONTROLLER 9500 VARIANT				
Model	Input Zone Capability	Output Pump Control Capability	Select whether Chillers/Boilers are to be sequenced by IPS Controller 9500 Models: 9501-9503 NO sequencing Models: 9511-9513 WITH sequencing	
IPS Controller 9501	up to 6 Zones	up to 6 pumps & 5 chillers/boilers	<input type="checkbox"/> IPS9501	<input type="checkbox"/> Sequence chillers/boilers?
IPS Controller 9502	up to 12 Zones	up to 6 pumps & 5 chillers/boilers	<input type="checkbox"/> IPS9502	<input type="checkbox"/> Sequence chillers/boilers?
IPS Controller 9503	up to 18 Zones	up to 6 pumps & 5 chillers/boilers	<input type="checkbox"/> IPS9503	<input type="checkbox"/> Sequence chillers/boilers?

- ### STANDARD FUNCTIONALITY and CONSTRUCTION
- A large-sized (10.4") touch-screen operator interface
  - On-screen menu driven operator interface
  - Manual or automatic system control (H-O-A selection)
  - Remote or local start/stop mode of operation
  - Field and factory password security
  - Alarm and event logging of 2000 events
  - Data trending with display screen
  - PID control loop, adjustable
  - UL Listed and CSA Approved
  - Internal circuit breaker protection
  - Automatic or manual pump alternation
  - Remote start/stop of variable speed primary pumps by chiller, boiler or BAS
  - Best Efficiency Point (BEP) staging
  - Wire-to-water efficiency monitoring and staging
  - 4 standard alarms: (1) drive, motor overload or pump failure (2) system fault (3) zone signal fault (4) primary pump fatal alarm
  - Separate operating status display of primary pump status, pump speed(s) and drive status
  - Digital inputs for pump differential pressure switches on all variable speed primary pumps
  - Output for remote alarm/horn signal
  - Input for silencer of remote alarm/horn
  - Standard serial communication between IPS Controller and VFD's
  - Separate input screen for DP, flow, temperature and kW sensors
  - Separate input screens for differential pressure sensor setpoint and operating range (psi or feet)
  - Logic outputs for VFD automatic bypass control
  - Logic outputs for chiller/boiler 2-way automatic ON/OFF isolation valves
  - Logic output for chiller/boiler 2-way automatic modulating bypass valve
  - Separate status screen of remote zone signals, zone faults, zone setpoint and active control zone
  - Embedded logic to prevent hunting, pump flow surge and motor overloading
  - Multi-color schematic active display of mechanical room hydronic circuit indicating operating status
  - Manual control screen for fixed speed, bypass or selected variable speed settings
  - Secure front cabinet door with lock and key
  - Diagnostic test of CPU, RAM and Flash memory

### DIMENSIONS and WEIGHTS

Model	Width	Height	Depth	Weight
IPS Controller 9501 / 9502	24 (610)	24 (610)	8 (203)	95 (43)
IPS Controller 9503	24 (610)	36 (914)	8 (203)	115 (52)

Note: Dimensions are in inches (mm) and weights are in lbs. (kg).

### POWER SUPPLY

Volts	Frequency	Phase
<input type="checkbox"/> 115 Vac	60 Hz	single
<input type="checkbox"/> 230 Vac		
<input type="checkbox"/> 240 Vac	50 Hz	

### ENCLOSURE DETAILS

<input type="checkbox"/> NEMA 1
<input type="checkbox"/> NEMA 2
<input type="checkbox"/> NEMA 3R
<input type="checkbox"/> NEMA 4
<input type="checkbox"/> NEMA 12
<input type="checkbox"/> EEMAC 2

- ### OPTIONS and ACCESSORIES
- A serial communications port for communication with a Building Automation System (standard communication options included with basic system are Modbus, LonWorks, Trend, Johnson Controls Metasys N2 and pLAN)
  - Serial communications port to receive full information from the variable speed drives (VFD's)
  - Optional communications gateways for BACnet and Webgate (TCP/IP)
  - Armstrong shall enter the project specific field enter parameters
  - Telephone communications modem and port
  - Flash memory card expandable to 6 MB
- End-of-curve on primary pumps using  DP sensor or  Flow sensor

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